Bounceback - the Problem

Configure Your New Computer		
Select a CPU	Select a Disk Drive	Select a Memory
○ 500 MHz	○ 10 GB	○ 64 MB
○ 600 MHz	○ 20 GB	○ 128 MB
○ 700 MHz	○ 30 GB	

Constraints of the Configuration System

K1: Compatible <CPU, Disk Drive> 500 MHz 10 or 20 GB
K2: Compatible <CPU, Disk Drive> 600 MHz 20 GB
K3: Compatible <CPU, Disk Drive> 700 MHz 30 GB

User selects the 500 MHz CPU

Configure Your New Computer		
Select a CPU	Select a Disk Drive	Select a Memory
● 500 MHz	○ 10 GB	○ 64 MB
○ 600 MHz	○ 20 GB	○ 128 MB
○ 700 MHz	○ 30 GB	

Another Example of Bounceback

Configure Your New Computer		
Select a CPU	Select a Disk Drive	Select a Memory
○ 700 MHz	○ 20 GB	○ 64 MB
○ 900 MHz	○ 40 GB	○ 128 MB

Constraints of the Configuration System

K1: Compatible <CPU, Disk Drive> 700 MHz 20 GB; 900 MHz 40 GB
K2: Compatible <Disk Drive, Memory> 20 GB 64 MB; 40 GB 128 MB
K3: Compatible <Memory, CPU> 64 MB 700 MHz; 128 MB 900 MHz

User selects the 700 MHz CPU - the 900 MHz CPU cannot be selected

Configure Your New Computer		
Select a CPU	Select a Disk Drive	Select a Memory
● 700 MHz	○ 20 GB	○ 64 MB
○ 900 MHz	○ 40 GB	○ 128 MB

The Invention eliminates incompatibility due solely to Bounceback

User selects the 700 MHz CPU - the 900 MHz CPU remains an available selection

Configure Your New Computer

Select a CPU	Select a Disk Drive	Select a Memory
● 700 MHz	○ 20 GB	○ 64 MB
○ 900 MHz	○ 40 GB	○ 128 MB

The Invention Handles Multiple User Inputs

Configure Your New Computer			
Select a CPU	Select a Disk Drive	Select a Memory	Select a Disk Controller
○ 700 MHz	○ 20 GB	○ 64 MB	○ DC 1
○ 900 MHz	○ 40 GB	○ 128 MB	○ DC 2

Constraints of the Configuration System

K1: Compatible <CPU, Disk Drive> 700 MHz 20 GB; 900 MHz 40 GB
K2: Compatible <Disk Drive, Memory> 20 GB 64 MB; 40 GB 128 MB
K3: Compatible <Memory, CPU> 64 MB 700 MHz; 128 MB 900 MHz
K4: Compatible <Disk Drive, Disk Controller> 20 GB DC 1; 40 GB DC 2

User selects the 700 MHz CPU and the DC 1

Configure Your New Computer			
● 700 MHz	○ 20 GB	○ 64 MB	● DC 1
○ 900 MHz	○ 40 GB	○ 128 MB	○ DC 2

Here, the 900 MHz CPU is eliminated by the selection of DC 1 as well as by bounceback from the selection of the 700 MHz CPU; accordingly, the 900 MHz CPU is incompatible with the user's selections